

What is claimed is:

1. A method for producing a dental prosthesis for a patient, comprising the steps of:  
measuring a tooth of the patient, the measuring step comprising moving a probe towards  
and away from the tooth, wherein the probe provides light to the surface of the tooth, and  
receives light reflected from the tooth through a plurality of receiving fiber optics, wherein the  
tooth is measured when the light received from the plurality of receiving fiber optics peak  
substantially simultaneously, wherein the measuring produces data indicative of the characteristics  
of the tooth;  
generating data for the dental prosthesis based on the measured data; and  
preparing the dental prosthesis.